CLAIMS

What is claimed is:

1. A method for displaying images in a medical navigation system assisted by x-ray images, said method comprising:

calibrating an x-ray device in the medical navigation system;

producing a plurality of two-dimensional x-ray images of a patient using the x-ray device;

during the producing step, determining positions of the x-ray device using the medical navigation system, said determining step producing positional data;

converting data associated with the two-dimensional x-ray images into three-dimensional data;

transferring (i) the two-dimensional x-ray images, (ii) x-ray device positional information corresponding to the two-dimension x-ray images, and (iii) the three-dimensional data to the navigation system; and

displaying at least the two-dimensional x-ray images on an image output of the medical navigation system.

2. The method as set forth in claim 1, the calibrating step includes determining a position of the x-ray device in relation to a calibration phantom using the navigation system.

3. The method as set forth in claim 1, wherein the calibrating step includes producing transformational matrices concerning spatial positions of the two-dimensional x-ray images.

4. The method as set forth in claim 3, wherein the transformational matrices assigned to individual two-dimensional x-ray images are also transferred to the navigation system when the two-dimensional x-ray images are transferred.

5. The method as set forth in claim 1, wherein the calibrating and producing steps are performed using a C-arm x-ray device.

6. The method as set forth in claim 5, wherein the step of producing a plurality of two-dimensional x-ray images includes producing a series of isocentric x-ray images.

7. A program which, when running on a computer or loaded onto a computer, causes the computer to perform a method in accordance with claim 1.

8. A machine-readable medium having stored thereon sequences of instructions that, when executed, cause at least an x-ray device and a navigation system to:

calibrate the x-ray device in the medical navigation system;

produce a plurality of two-dimensional x-ray images of a patient using the x-ray device;

determine positions of the x-ray device using the medical navigation system to produce positional data;

convert data associated with the two-dimensional x-ray images into three-dimensional data;

transfer (i) the two-dimensional x-ray images, (ii) x-ray device positional data corresponding to the two-dimensional x-ray images, and (iii) the three-dimensional data to the navigation system; and

display at least the two-dimensional x-ray images on an image output of the medical navigation system.